

CLAIMS

1. A recording liquid deposited on a support in the state of liquid droplets for recording thereon, comprising

a dyestuff;

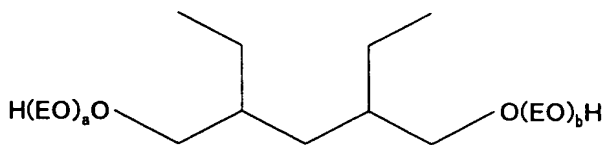
a solvent for dispersing said dyestuff; and

an ethylene oxide adduct of a dihydric alcohol, containing a hydrocarbon group with 9 or less carbon atoms and having a ratio I/V of an inorganic value (IO) to an organic value (OV) not less than 1 and not larger than 1.37.

2. The recording liquid according to claim 1 wherein said ethylene oxide adduct of a dihydric alcohol at least includes a branched hydrocarbon group.

3. The recording liquid according to claim 1 wherein said ethylene oxide adduct of a dihydric alcohol includes at least one or more of organic compounds represented by the chemical formulas 1 to 3:

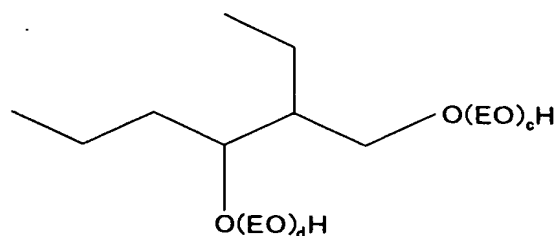
[Chemical formula 1]



III(1)

where $1 \leq a+b \leq 6$

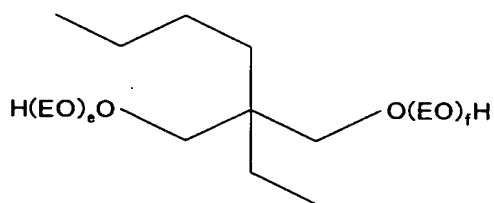
[Chemical formula 2]



III(2)

where $1 \leq c+d \leq 5$

[Chemical formula 3]



III(3)

where $1 \leq e+f \leq 6$.

4. The recording liquid according to claim 1 wherein the dynamic surface tension (γ_{20}) at 20 Hz is not less than 30 mN/m and wherein the dynamic surface tension (γ_1) is not larger than 38 mN/m.

5. A liquid cartridge mounted to a liquid supply device for operating as a supply source for said recording liquid for said liquid supply device, said liquid supply device being provided to a liquid emitting device adapted for emitting the recording liquid, held in a liquid vessel, in the form of liquid droplets, and depositing the

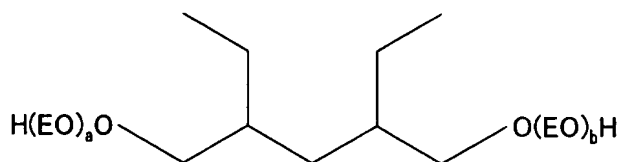
emitted ink on a support, for effecting the recording, wherein

said recording liquid comprises a dyestuff, a solvent for dispersing said dyestuff and an ethylene oxide adduct of a dihydric alcohol, containing a hydrocarbon group with 9 or less carbon atoms and having a ratio I/V of an inorganic value (IO) to an organic value (OV) not less than 1 and not larger than 1.37.

6. The liquid cartridge according to claim 5 wherein said ethylene oxide adduct of a dihydric alcohol at least includes a branched hydrocarbon group.

7. The liquid cartridge according to claim 5 wherein said ethylene oxide adduct of a dihydric alcohol includes at least one or more of organic compounds represented by the chemical formulas 1 to 3:

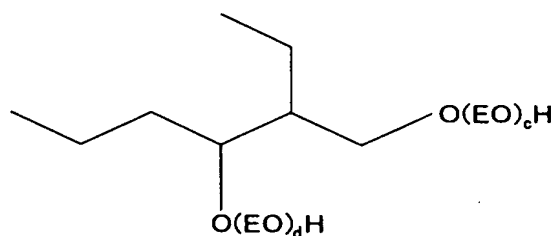
[Chemical formula 4]



(1)

where $1 \leq a+b \leq 6$

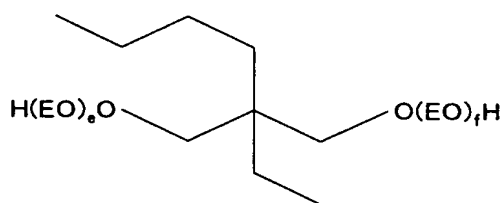
[Chemical formula 5]



III(2)

where $1 \leq c+d \leq 5$

[Chemical formula 6]



III(3)

where $1 \leq e+f \leq 6$.

8. The recording liquid according to claim 5 wherein the dynamic surface tension (γ_{20}) at 20 Hz is not less than 30 mN/m and wherein the dynamic surface tension (γ_1) is not larger than 38 mN/m.

9. The liquid cartridge according to claim 5 wherein said liquid vessel includes a liquid reservoir for accommodating said recording liquid, a connecting part for connecting the liquid cartridge to a liquid supply device so that, when the liquid cartridge is connected to the liquid supply device, the recording liquid contained in

said liquid reservoir may be supplied to said liquid supply device, a communication port for taking in outside air in an amount corresponding to a decreased amount of the recording liquid in said liquid reservoir when the liquid cartridge is mounted on the liquid supply device and said recording liquid is supplied from said liquid reservoir to said liquid supply device, an air inlet duct for establishing communication between said liquid reservoir and the communication port for introducing air taken in via said communication port into said liquid reservoir, and a storage arranged between said communication port and the air inlet duct for storing the recording liquid flowing out from said liquid reservoir.

10. A liquid emitting device comprising

emitting means including a liquid chamber for storing a recording liquid, a supply part for supplying said recording liquid to said liquid chamber, one or more pressure generating element(s) provided to said liquid chamber for thrusting said recording liquid stored in said liquid chamber, and an emitting opening for emitting said recording liquid, thrust by said pressure generating element, onto the major surface of a support from said liquid chamber as a liquid droplet; and

a liquid cartridge connected to said emitting means for operating as a supply source for said recording liquid;

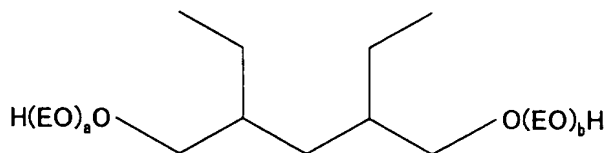
said recording liquid comprising a dyestuff, a solvent for dispersing said dyestuff and an ethylene oxide adduct of a dihydric alcohol, containing a hydrocarbon group with 9 or less carbon atoms and having a ratio I/V of an

inorganic value (IO) to an organic value (OV) not less than 1 and not larger than 1.37.

11. The liquid emitting device according to claim 10 wherein said ethylene oxide adduct of a dihydric alcohol, at least includes a branched hydrocarbon group.

12. The liquid emitting device according to claim 10 wherein said ethylene oxide adduct of a dihydric alcohol in said recording liquid includes at least one or more of organic compounds represented by the chemical formulas 1 to 3:

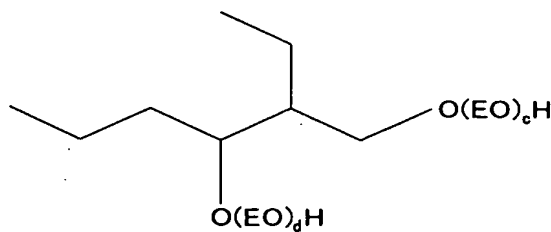
[Chemical formula 7]



III(1)

where $1 \leq a+b \leq 6$

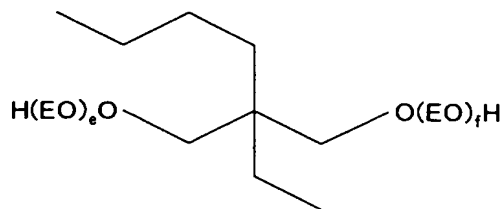
[Chemical formula 8]



III(2)

where $1 \leq c+d \leq 5$

[Chemical formula 9]



III(3)

where $1 \leq e+f \leq 6$.

13. The liquid emission device according to claim 10 wherein the recording liquid has a dynamic surface tension (γ_{20}) at 20 Hz not less than 30 mN/m and a dynamic surface tension (γ_1) at 1 Hz not larger than 38 mN/m.

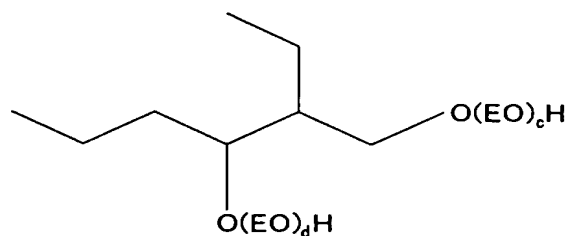
14. The liquid emission device according to claim 10 wherein said emitting openings of said emission means are juxtaposed in a line.

15. A liquid emitting method employing a liquid emitting device comprising

emitting means including a liquid chamber for storing the recording liquid, a supply part for supplying said recording liquid to said liquid chamber, one or more pressure generating element(s) provided to said liquid chamber for thrusting said recording liquid stored in said liquid chamber, and an emitting opening for emitting said recording liquid, thrust by said pressure generating element, onto the major surface of a support from said liquid chamber as liquid droplets; and

a liquid cartridge connected to said emitting means for operating as a supply source for said recording liquid;

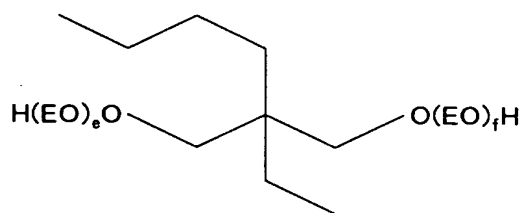
[Chemical formula 11]



III(2)

where $1 \leq c+d \leq 5$

[Chemical formula 12]



III(3)

where $1 \leq e+f \leq 6$

is used as said ethylene oxide adduct of the dihydric alcohol in said recording liquid.

18. The liquid emission method according to claim 15 wherein the recording liquid has a dynamic surface tension (γ_{20}) at 20 Hz not less than 30 mN/m and a dynamic surface tension (γ_1) at 1 Hz not larger than 38 mN/m.

19. The liquid emission method according to claim 15 wherein said emitting openings of said emission means are juxtaposed in a line.